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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/034,187 03/03/98 MATYJASZEWSKI

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IM22/1010

EXAMINER

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CHEUNG, W

ART UNIT	PAPER NUMBER
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1713

28

DATE MAILED:

10/10/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/034,187

Applicant(s)

MATYJASZEWSKI ET AL.

Examiner

William K Cheung

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 July 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14, 21-36, 38, 39, 43-64 and 66-80 is/are pending in the application.
- 4a) Of the above claim(s) 1-14, 46-54, 60 and 61 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 21-27, 29-36, 38, 39, 43-45, 55-59, 62-64 and 66-80 is/are allowed.
- 6) ☒ Claim(s) 28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3, 6, 7.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Continued Prosecution Application

1. The request filed on July 25, 2001 for a Request for Continued Examination (RCE) under 37 CFR 1.53(d) based on parent Application No. 09034187 is acceptable and a CPA has been established. An action on the CPA follows.
2. In view of Amendment (Paper No. 27) submitted on July 25, 2001, cancel claims 65, and add new claims 68-80. Claims 1-14, 46-54, 60-61 are non-elected claims. Claims 21-36, 38-39, 43-45, 55-59, 62-64, 66-80 are being examined on merit.
3. In view of Amendment (Paper No. 27), the objection of claim 45 is withdrawn. Further, the rejection of claims 26, 35, 36, 38, 39, 43, 64-67 under 35 U.S.C. 112, second paragraph, is withdrawn.
4. In view of Amendment (Paper No. 27), the rejection of claims 21-23, 28, 31, 34, 55, 62, and 63 under 35 U.S.C. 102(b) as being anticipated by Veregin et al. (US 5, 610,250) is withdrawn. The rejection of claim 27 under 35 U.S.C. 102(b) as being anticipated by Odian, Principles of Polymerization, Third Edition, John Wiley & Sons, 1991 (page 206) is withdrawn. Further, the rejection of claims 24, 25, and 32 under 35 U.S.C. 103(a) as being unpatentable over Veregin et al. (US 5, 610,250) is withdrawn.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claim 28 stands rejected under 35 U.S.C. 102(b) as being anticipated by Veregin et al. (US 5, 610,250) for the reasons adequately set forth from paragraph 6 (Paper No. 24). Applicants' argument on the molecular weight limitation on claim 28 is not in the claim. It is likely that applicants have forgotten to amend claim 28 in Amendment (Paper No. 27).

Allowances

7. Claims 21-27, 29-36, 38-39,43-45, 55-59, 62-64, 66-80 are allowed.

8. The following is an examiner's statement of reasons for allowance:

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The present claims are allowable over the closest reference of Veregin et al. (US 5,610,250).

*The invention of Claims 21-36, 38-39, 43-45, 55-59, 62-64, 66-80 relates to a **copolymer comprising: one or more free radically copolymerizable monomers**, wherein the polymer exhibits a stereochemistry and microstructure, as defined by tacticity and sequence distribution, of a material formed by a free radical polymerization process, and displays a **molecular weight distribution of less than 2.0**; a residue of an initiator, wherein the residue is not a residue of a carbon tetrachloride initiator; a **thermally stable end group** selected from the group consisting of a **halogen, Cl, Br, I, OH, CN, N₃, OR¹⁰, SR¹⁴, SeR¹⁴, OC(=O)R¹⁴, OP(=O)R¹⁴, OP(=O)(OR¹⁴)₂, ON(R¹⁴)₂, carboxylic acid halide, H, NH₂, COOH, and olefinic end groups**, where R¹⁴ is aryl or a straight or branched C₁-C₂₀ alkyl group or where an N(R¹⁴)₂ group is present, the two R¹⁴ groups may be joined to form a 5-, 6-, or 7- member heterocyclic ring, and R¹⁰ is an alkyl of from 1 to 20 carbon atoms or an alkyl of from 1 to 20 carbon atoms in which each of the hydrogen atoms may be replaced by a halide, alkenyl of from 2 to 20 carbon atoms, alkynyl of from 2 to 10 carbon atoms, phenyl, phenyl substituted with from 1 to 5 halogen atoms or alkyl groups with from 1 to 4 carbon atoms, aralkyl, aryl, aryl substituted alkyl, in which the aryl group is phenyl or substituted phenyl and the alkyl group is from 1 to 6 carbon atoms; a molecular weight in excess of two monomer units.*

The closest prior art of Veregin et al. in examples II to IV, and VII disclose copolymers that are only remotely similar to the copolymers being claimed because the disclosed copolymers of Veregin et al. are silent that the copolymers are terminated with a thermally stable end group selected from the group consisting of a halogen, Cl, Br, I, OH, CN, N₃, OR¹⁰, SR¹⁴, SeR¹⁴, OC(=O)R¹⁴, OP(=O)R¹⁴, OP(=O)(OR¹⁴)₂, ON(R¹⁴)₂, carboxylic acid halide, H, NH₂, COOH, and olefinic end groups, where R¹⁴ is aryl or a straight or branched C₁-C₂₀ alkyl group or where an N(R¹⁴)₂ group is present, the two R¹⁴ groups may be joined to form a 5-, 6-, or 7- member heterocyclic ring, and R¹⁰ is an alkyl of from 1 to 20 carbon atoms or an alkyl of from 1 to 20 carbon atoms in which each of the hydrogen atoms may be replaced by a halide, alkenyl of from 2 to 20 carbon atoms, alkynyl of from 2 to 10 carbon atoms, phenyl, phenyl substituted with from 1 to 5 halogen atoms or alkyl groups with from 1 to 4 carbon atoms, aralkyl, aryl, aryl substituted alkyl, in which the aryl group is phenyl or substituted phenyl and the alkyl group is from 1 to 6 carbon atoms; a molecular weight in excess of two monomer units. Therefore, the disclosure of Veregin et al. do not teach or suggest to one of ordinary skill in the art to prepare a copolymer containing end groups that are a thermally stable end group selected from the group consisting of a halogen, Cl, Br, I, OH, CN, N₃, OR¹⁰, SR¹⁴, SeR¹⁴, OC(=O)R¹⁴, OP(=O)R¹⁴, OP(=O)(OR¹⁴)₂, ON(R¹⁴)₂, carboxylic acid halide, H, NH₂, COOH, and olefinic end groups, where R¹⁴ is aryl or a straight or branched C₁-C₂₀ alkyl group or where an N(R¹⁴)₂ group is present, the two R¹⁴ groups may be joined to form a 5-, 6-, or 7- member heterocyclic ring, and R¹⁰ is an alkyl of from 1 to 20 carbon atoms or an alkyl of from 1 to 20 carbon atoms in which each of the hydrogen

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atoms may be replaced by a halide, alkenyl of from 2 to 20 carbon atoms, alkynyl of from 2 to 10 carbon atoms, phenyl, phenyl substituted with from 1 to 5 halogen atoms or alkyl groups with from 1 to 4 carbon atoms, aralkyl, aryl, aryl substituted alkyl, in which the aryl group is phenyl or substituted phenyl and the alkyl group is from 1 to 6 carbon atoms; a molecular weight in excess of two monomer units. Therefore, the invention of claims 21-27, 29-36, 38-39, 43-45, 55-59, 62-64, 66-80 is allowed.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to William K Cheung whose telephone number is (703) 305-0392. The examiner can normally be reached on Monday-Friday 9:00AM to 2:00PM; 4:00PM to 8:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (703) 308-2450. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-5885 for regular communications and (703) 305-5885 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



William K. Cheung

October 9, 2001



DAVID W. WU
SUPERVISORY PATENT EXAMINER
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